

than that of the combined experience table of the English companies. Above the age of thirty, the American mortality is decidedly less than the English, while at the earlier ages it is greater. The American table shows a maximum of advantage over the English experience about the age of fifty. The deaths at this age are about one in seventy-three by the American table, while the English table gives one death in sixty at this age. The experience before us greatly increases this discrepancy on the two sides of the Atlantic. At the age of fifty, the Connecticut company has only one death in ninety-three, against the numbers just stated for the English and American tables respectively. Perhaps the case is seen in the strongest light by remarking that the actual mortality at the ages from thirteen to twenty has been appreciably the same as at the ages from forty-six to fifty. Whether this extraordinary mortality is due to some special cause, is not clearly stated. If the lives which have been accepted by the company are representative ones of their class, it would seem that young Americans are subject to some extraordinary liability to death.

The insured are divided into forty-nine classes of occupations. It will perhaps sadden the reader to learn that travelling-agents, among whom book-agents are undoubtedly classed, seem to have the greatest viability of all. Taking them and lumber-men together, the death-rate is less than half that given by the tables. Dentists come third, and meet with the same fortunes as professors and teachers: for both classes the mortality is six-tenths that of the tables. How little mere occupation has to do with viability, is shown by the fact, that, while bankers and capitalists suffer one-fourth less, brokers, speculators, and operators suffer twelve per cent more than the tabular mortality. Officers of the navy, and of ocean and sailing vessels, have suffered the greatest comparative mortality of all, having died twice as fast as the general average of the insured. This is no doubt to be attributed to the civil war, which occurred during the time covered by the experience. Taking out this case as exceptional, the greatest mortality of all would be found amongst liquor refiners and dealers, bar-keepers, landlords, etc. This is quite in accord with general experience.

It is much to be desired that the mortality statistics of the census should be placed on a better basis. If the census office were to be made a permanent one, we might expect such a result to be attainable. S. NEWCOMB.

#### AMERICAN FLASH LANGUAGE IN 1798.

THE cant or flash language, or thieves' jargon, was scarcely known, even by name, in the United States, until attention was drawn to it some forty years ago by the publication of Ainsworth's 'Rookwood' and 'Jack Sheppard,' followed by Dickens's 'Oliver Twist.' Even then it was regarded as a purely English product; and it was not until 1859 that Mr. G. W. Matsell, chief of police in New-York City, published a little work upon this dialect, showing that it had been to some extent transplanted to this side of the Atlantic. I am not aware that any mention has ever been made of the fact that there exists a full glossary of this thieves' jargon, as spoken nearly a century ago at the Castle in Boston harbor (now Fort Independence), which was used down to the year 1798 as a state penitentiary. The reason for this neglect lies, no doubt, in the fact that the book in which this glossary is given — 'The life and adventures of Henry Tufts' (Dover, N.H., 1807) — is an exceedingly rare one, having been, it is said, suppressed by the author's sons. It is not to be found in any public library in Cambridge or Boston; and the only copy I have ever seen was picked up by myself at an old book-store, many years since, and was presented to the Worcester, Mass., city library. In a paper to be published elsewhere, I have given some account of this singular book; but this glossary of terms deserves a separate treatment as a contribution toward the history of the American speech. There is nothing more curious than the vitality of a class of words never employed in good society, and never admitted into any dictionary. While we all claim theoretically that vocabularies, and even academies, are necessary for the preservation of a language, we yet find in practice that these base-born brats, these children of thieves and outcasts, have a vitality of their own. The profane or indecent phrases which boys hear at school, and which they repeat with bated breath if at all — these same words were heard at school by their grandfathers, and have led a hardy and disreputable existence ever since; yet they remain unchanged, and time has not, as Sir Charles Pomander said of his broken statues, 'impaired their indelicacy.' Tufts's list does not, for a wonder, stray into the domain of impropriety, though the rest of his book does; but he gives many words that can be traced through other similar dictionaries, many that occur in his glossary alone, and others that are now familiar, and are commonly supposed to be recent. I have re-

arranged his glossary in alphabetical form, and have in a few cases analyzed a phrase into its component words; but I have not altered his definitions. In the table that follows, his list of words will be found compared with various other lists of the same description.

The books which I have selected for comparison were published at various dates, some before and some after Tufts's glossary, which was compiled at least as early as 1798, he having been a prisoner at the Castle for the five years preceding. These books are as follows, arranged in order of date, and they are designated in the accompanying table by this date alone.

1573, Harman's (Thomas) 'Caveat for common cursetors,' reprinted in J. C. Hotten's 'Slang dictionary,' ed. 1873, p. 15.

1673, Head's (Richard) 'Canting academy, to which is added a compleat Canting Dictionary.'

1785, Grose's (Francis) 'Classical dictionary of the vulgar tongue.'

1790, Potter's (Henry T.) 'New dictionary of the cant and flash languages.'

1811, 'Lexicon Balatronicum' [founded on Grose].

1859, Matsell's (George W.) 'Dictionary of the thieves' jargon' [New York].

1873, Hotten's 'Slang dictionary,' a new edition.

*Tufts's glossary, 1793-98 (Boston).*

Blower . . . . .	A woman . . . . .	1673 ( <i>blower</i> ); 1785 (same); 1790; 1811; 1873.
Bonny lay . . . . .	Highway robbery . . . . .	[The best <i>lay</i> , or device.]
Briar . . . . .	A saw . . . . .	[Obvious analogy.]
Chant . . . . .	Writing of any kind . . . . .	1790 ( <i>chant</i> , to make known); 1859 (same, and also <i>chant</i> = name).
Clout . . . . .	A handkerchief . . . . .	1859; 1873 (called 'old cant').
Cly . . . . .	A pocket . . . . .	1573; 1785; 1790; 1811; 1859; 1873 [Anglo-Saxon <i>clea</i> , claws?].
Cove . . . . .	A man . . . . .	1573 ( <i>cove</i> ); 1673; 1785 ( <i>cove</i> or <i>coffin</i> ); 1790 (landlord); 1811; 1859 [found in Dekker's 'Wits' recreations'].
Crab . . . . .	A shoe . . . . .	1785 ( <i>crab-shells</i> , Irish); 1811 (same); 1859 (same, and also <i>crabs</i> = feet); 1873.
Crabkin . . . . .	A shoemaker's shop . . . . .	
Crack . . . . .	To break open . . . . .	1785; 1790; 1811; 1859; 1873.
Darky . . . . .	Cloudy . . . . .	1573 ( <i>darkemans</i> = the night); 1673, 1785, 1790, 1811 (the same); 1873 ( <i>darky</i> = twilight).
Dead up to, to be . . . . .	To know well . . . . .	[ <i>Dead</i> = very, exceeding. Halliwell, North.]
Dinge . . . . .	A dark night . . . . .	[To <i>dinge</i> = to drizzle. Halliwell.]
Dingy cove . . . . .	A negro . . . . .	1785 ( <i>dingy Christian</i> = a mulatto); 1811 (same).
Do . . . . .	To rob . . . . .	1785; 1811; 1873.
Douse the glim . . . . .	To put out the light . . . . .	1811; 1859; 1873 [ <i>glim</i> or <i>glim</i> ].
Drag . . . . .	A prisoner . . . . .	[One <i>dragged</i> by the police?]
Dub . . . . .	A false key . . . . .	1785; 1790 ( <i>dubb the jigger</i> = lock the door); 1811; 1859.
Evening sneak . . . . .	Going into a house at night, where the doors are open, . . . . .	1785; 1790; 1811.
Flamer . . . . .	Vitriol . . . . .	[Inflamer?]
Flat . . . . .	A foolish man . . . . .	1785; 1790; 1811; 1859; 1873.
Gentleman . . . . .	A crowbar . . . . .	
Glaze . . . . .	A square of glass . . . . .	1785 ( <i>glazier</i> = a window-thief); 1811; 1859; 1873.
Glin . . . . .	A star or light . . . . .	1573 ( <i>glimmar</i> = fire); 1673, 1790 (the same); 1811 ( <i>glim</i> ); 1859 ( <i>glimsticks</i> = candlesticks); 1873 ( <i>glim</i> ).
Gorge . . . . .	A person or fellow . . . . .	1811 ( <i>gorger</i> = a gentleman). [Gypsy, <i>gorgio</i> .]
Grub . . . . .	Victuals . . . . .	1785; 1790; 1811.
Hammers to you, I'm, . . . . .	I know what you mean. . . . .	
Hookses . . . . .	Neat-cattle . . . . .	
Horney . . . . .	A sheriff . . . . .	1790 ( <i>hornees</i> ); 1859 ( <i>horness</i> = watchman).
Jarvel . . . . .	A jacket . . . . .	
Jigger . . . . .	A door . . . . .	1573 ( <i>gyger</i> ); 1790; 1811 ( <i>jig</i> ); 1859; 1873.
Kickses . . . . .	Breeches . . . . .	1785 ( <i>kicks</i> ); 1790, 1811 ( <i>kicks</i> or <i>kickseys</i> ); 1859 ( <i>kicksies</i> ); 1873 (same).
Kin . . . . .	A stone . . . . .	
Kinchen . . . . .	A child . . . . .	1573 ( <i>kyuchen</i> ); 1673; 1785; 1790; 1811; 1859; 1873. [German, <i>kindchen</i> .]
Lay . . . . .	[Mode of stealing] . . . . .	1785; 1811; 1859; 1873.
Leg-bags . . . . .	Stockings . . . . .	[ <i>Bags</i> = trousers, London <i>Punch</i> .]
Long tog . . . . .	A coat . . . . .	[ <i>Toga</i> . Shaksp., <i>Togde</i> .]
Lour . . . . .	Money . . . . .	1573 ( <i>Loure</i> , a Wallachian gypsy word); 1673; 1785; 1790 ( <i>lour</i> or <i>lower</i> ); 1811; 1859 ( <i>lowre</i> ); 1873.
Mitre . . . . .	A hat . . . . .	
Napping . . . . .	Stealing . . . . .	1673; 1785; 1790; 1811; 1859; 1873.
Napping his bib . . . . .	Crying . . . . .	1790; 1873.
Nipping-jig . . . . .	A gallows . . . . .	1673 ( <i>nubbing cheat</i> ).
Oliver . . . . .	The moon . . . . .	1790; 1859; 1873 ('nearly obsolete').
Petre yourself . . . . .	Take care of yourself . . . . .	1790 ( <i>peterees</i> = thieves of <i>peters</i> or trunks); 1859 ( <i>petter-biter</i> = same).
Pops . . . . .	Pistols . . . . .	1785; 1790; 1811; 1859; 1873.
Prad . . . . .	A horse . . . . .	1573 ( <i>praucner</i> ); 1673 ( <i>prancer</i> ); 1790; 1811; 1859; 1873 ('old cant').
Pradholder . . . . .	A bridle . . . . .	
Qua . . . . .	A jail . . . . .	1573 ( <i>guyen ken</i> ); 1673 ( <i>queer ken</i> ); 1790 ( <i>quod</i> ); 1873 ( <i>quad</i> or <i>quod</i> , an abbreviation of quadrangle).
Quakeeper . . . . .	A jailer . . . . .	
Quid . . . . .	A guinea . . . . .	1790; 1859 ( <i>quid</i> = \$5).
Quillpipes . . . . .	Boots . . . . .	1785 ( <i>quailpipe boots</i> , so called because plaited like a quailpipe); 1811 (same).
Quisby . . . . .	Mean . . . . .	1785 ( <i>quis</i> = a strange-looking fellow); 1873 ( <i>quisby</i> = an amplification of <i>queer</i> ).
Roram . . . . .	The sun . . . . .	[Possibly a corruption of Rowland, to correspond to <i>Oliver</i> = the moon.]
Rum-blower . . . . .	A gentlewoman . . . . .	1785 (a handsome wench); 1790 (same); 1811 (same); 1859 (same).
Rum-cove . . . . .	A gentleman . . . . .	1785 (a dexterous rogue!); 1790 (a good landlord); 1811 (same as 1785).
Scrag a lay, to . . . . .	To steal clothes from a hedge . . . . .	

Slangs . . . . .	Irons . . . . .	1790 ( <i>slanged</i> = ironed); 1811; 1859 ( <i>slanged</i> ; also <i>slang</i> = watch-chain); 1873 (only a watch-chain).
Smish . . . . .	A shirt . . . . .	1573 ( <i>mish</i> or <i>commission</i> ); 1790 ( <i>mish</i> or <i>smeeesh</i> ); 1811 (same as 1785); 1859 ( <i>mish</i> ); 1873 (both <i>mish</i> and <i>smish</i> ).
Snuskin . . . . .	A nail . . . . .	[ <i>Snuskin</i> = a delicate morceau. Halliwell.]
Spotted, you're . . . . .	You are like to be found out, . . . . .	1859 ( <i>spot</i> = point out as suspected); 1873 (marked by the police). [Mentioned as 'recent' in Bartlett's 'Americanisms.']
Spread . . . . .	A saddle . . . . .	
Star a glaze, to . . . . .	To cut out a pane . . . . .	1811; 1859; 1873.
Suck . . . . .	Rum [liquor] . . . . .	1785; 1790; 1811; 1859; 1873 (only <i>suck-casa</i> = a public-house).
Tapster . . . . .	A dog . . . . .	[Probably a mere variation of <i>Yapster</i> .]
Thumpkin . . . . .	A barn of hay . . . . .	[ <i>Thumpkin</i> = a clown. Halliwell.]
Topt . . . . .	Hanged . . . . .	1673, 1785 ( <i>topping cove</i> = the hangman); 1790; 1811; 1859; 1873.
Tonch, to . . . . .	To rob . . . . .	1785; 1790; 1811; 1859.
Trick . . . . .	A watch . . . . .	1859 ( <i>trick</i> = any thing stolen by a pickpocket).
Undub, to . . . . .	To unlock . . . . .	1859 ( <i>under-dubber</i> = turnkey).
Water-sneak . . . . .	Breaking into a vessel . . . . .	1785 ( <i>waterpad</i> = robber of ships); 1790 (same).
Wheel . . . . .	A dollar . . . . .	
Wibble . . . . .	An anger . . . . .	1785 ( <i>wibble</i> = bad drink); 1811 (same); 1859 (same). [ <i>Wimble</i> = an auger. Dryden.]
Yapster . . . . .	A dog . . . . .	[ <i>Yap</i> = a cur. Halliwell.]

[When a date alone is given in the above table, the dictionary of that date gives both word and definition as Tufts gives them.]

It will be observed that a certain number of Tufts's words are not to be found in any of the books of English slang; while, from the correctness of the remainder, it is unlikely that he invented even these. The words *bcnny lay* (robbery), *briar* (a saw), *drag* (a prisoner, i.e., one dragged?), *flamer* (vitriol), *gentleman* (a crowbar), *hammers to you* (implying comprehension), *hookses* (cattle), *jarvel* (a jacket), *kin* (a stone), *nipping-jig* (gallows), *roram* (the sun), *to scrag a lay* (to steal from a hedge), *snuskin* (a nail), *spread* (a saddle), *tapster* and *yapster* (a dog), *thumpkin* (a barn of hay), and *wheel* (a dollar),—these are not found in the other lists, and some of them are difficult to explain. Other phrases, though not elsewhere mentioned, are easy of derivation; as *crabkin* (crab-ken?), *dead up to* (like dead sure), *dinge* (dingy), *leg-bags* (stockings), *long togs* (long-clothes), *mitre* (hat), and *pradholder* (bridle). In a few cases the phrase is preserved by Madsell (1859) as a part of American slang, although not now to be found in the English slang dictionaries; thus, *trick*, in the sense of something stolen, and *undub* (unlock), which apparently survives here in the phrase *under-dubber* (turnkey). In regard to any word untraced, I should be glad of suggestions.

T. W. HIGGINSON.

Cambridge, Mass.

### WALKING AND RUNNING.<sup>1</sup>

ALTHOUGH every one pretends to know how to walk and run, still there are few who do not make

<sup>1</sup> Abridged from *La Nature*.

useless effort; and the few good runners or walkers are not necessarily those with great muscular force, or power to withstand fatigue, or those who have merely a special aptitude in this direction, but rather the persons who by training have found, little by little, the best possible means of using their natural powers. They are incapable of transmitting the secret of their ability, and, indeed, they hardly have time to reflect upon the movements which they execute so mechanically. It is hoped that by means of the camera this secret can be found.

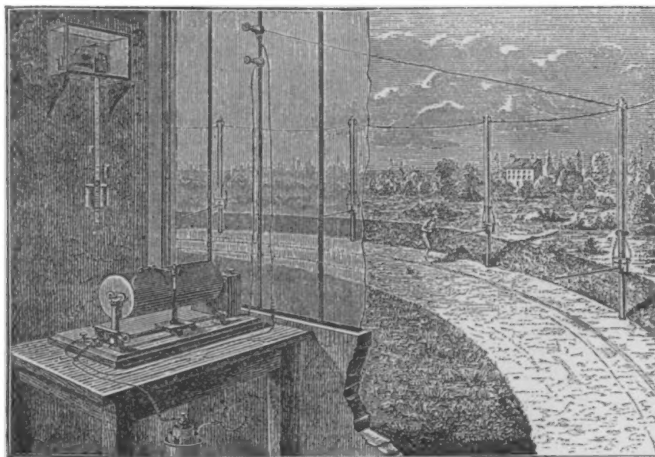


FIG. 1.

Experiments have been undertaken at the physiological station in Paris to study these movements. In fig. 1 a man is seen running upon the experiment-track, and in the same figure the recording apparatus is shown. A telegraph-line, resting upon poles placed fifty metres apart, reaches around the track, which is half a kilometre in circumference. The runner, as he passes each post, finds his course barred by a horizontal rod (fig. 2), which gives way before the slightest pressure, but which cannot be moved without causing an interruption in the circuit of the telegraph-line. This interruption records itself in the laboratory